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EXAMINER	
FERNANDES, CHERYL M	
ART UNIT	**PAPER NUMBER**
2163	

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/028,423	IBUKI ET AL.	
	Examiner	Art Unit	
	Cheryl M. Fernandes	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22 and 45-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22 and 45-67* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 November 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the Request for Continued Examination filed September 14, 2005. Claims 1-22 and 45-67 are pending. Claims 1, 45, and 67 have been amended. Claims 23-44 are cancelled.

Response to Arguments

2. Applicant's arguments with respect to claims 1-22 and 45-67 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-6, 8, 9, 11, 45-50, 52, 53, 55, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,243,670 issued to Bessho et al. (hereafter Bessho), and further in view of U.S. Patent No. 6,574,622 issued to Miyauchi et al (hereafter Miyauchi).

Referring to claim 1, Bessho discloses a query-and-response processing method for receiving a search request concerning a query input by a user (natural language sentence query input, Fig. 2; col. 6, lines 59-64) and searching a database (information database, Fig. 3, element 28) to present search results to the user, comprising:

- analyzing said search request provided by said user (Fig. 2, steps S11-S13; col. 6, line 59 – col. 7, line 20);

- generating search criteria based on a result of the analysis of said search request (keywords generated, Fig. 2, step S14; col. 7, lines 21-26);
- searching said database according to the generated search criteria (Fig. 3, element 26; col. 7, lines 50-61; col. 8, line 57 – col. 9, line 3);
- analyzing an intention of the query based on the result of the analysis of said search request (Fig. 2, step S15, col. 7, lines 27-31), wherein the analyzing comprises:
    - o extracting a top level component of syntactic hierarchy of said search request (Fig. 1 and 6, col. 6, lines 29-55; 'head verb frame extraction', 'deep case frame extraction', col. 12, line 3 – col. 14, line 8);
- formatting an output by selecting items to be presented to the user (Fig. 2, steps S15-S18, col. 7, lines 27-45), wherein the formatting comprises determining an output format of search results according to a result of said analysis of the intention of said query without further input by the user (search results are selected and ordered based on determined category – see col. 7, lines 39-45); and
- presenting data to said user (col. 7, lines 39-45).

However, while Bessho discloses all of the above claimed subject matter, it remains silent as to determining whether said search request includes an interrogative, and extracting a component qualified by the interrogative in a case said search request includes an interrogative.

However, Miyauchi teaches analogous art that includes determining whether a search request includes an interrogative (Abstract; col. 8, lines 35-66, see Fig. 6), and extracting a component qualified by the interrogative in a case said search request includes an interrogative (col. 9, lines 3-12 and 38-67, see Fig. 7).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Bessho with the teachings of Miyauchi to include determining whether a search request includes an interrogative, and extracting a component qualified by the interrogative in a case said search request includes an interrogative.

The ordinary skilled artisan would have been motivated to modify Bessho per the above for the purpose of effecting easy and accurate information retrieval in accordance with a user's query intention (Miyauchi, col. 1, lines 9-18).

Referring to claim 45, the limitations of the claim repeat the respective limitations of claim 1 above in the form of a medium containing a program (Bessho, semantic analysis program, col. 1, line 66 – col. 2, line 9) and are hereby rejected for the same reasons as claim 1.

Referring to claim 67, the limitations of the claim repeat the respective limitations of claim 1 above in the form of an apparatus (Bessho, semantic analysis apparatus, col. 1, line 66 – col. 2, line 9) and are hereby rejected for the same reasons as claim 1.

Referring to claims 2 and 46, the combination of Bessho/Miyauchi discloses determining a topic item, said topic item being a core topic of the search request (Bessho, Fig. 2, step S15, col. 7, lines 27-31), and selecting an item to be presented to said user based on the determination as to whether or not the item is the topic item (Bessho, col. 7, lines 27-45).

Referring to claims 3 and 47, the combination of Bessho/Miyauchi discloses processing information by ordering the search results of presentation items (Bessho, col. 7, lines 39-45; Miyauchi, Fig. 6).

Referring to claims 4 and 48, the combination of Bessho/Miyauchi discloses adjusting a level of detail of the presentation to provide all specific items or only main items relating to a particular subject (Miyauchi, see coincidence range, Fig. 6).

Referring to claims 5 and 49, the combination of Bessho/Miyauchi discloses classifying the search results according to specified item values to organize by category the information to be presented to the user (Miyauchi, see Fig. 8-11).

Referring to claims 6 and 50, the combination of Bessho/Miyauchi discloses using data specifying an item relating to a particular item to add the item relating to the

particular item to the items to be presented, after the items to be presented to said user are determined (Miyauchi, see Fig. 12-13).

Referring to claims 8 and 52, the combination of Bessho/Miyauchi discloses determining an item under which a value is specified as search criteria and removing an item used as the search criteria from presentation items after the presentation items are determined and adding the value of said item to the presentation items as the description of said presentation items (Miyauchi, see search criteria in Fig. 13 and 14).

Referring to claims 9 and 53, the combination of Bessho/Miyauchi discloses an item under which a value is specified and for which no search data is included in the search results is excluded from presentation items during the selection of the presentation items (Miyauchi, see Fig. 15).

Referring to claims 11 and 55, the combination of Bessho/Miyauchi discloses providing an item database containing all the values in a particular item that are held in a database to be searched (Miyauchi, Fig. 8-11), and, if no entry in said item database matches a specified value in the item in the search request, searching for entries having values similar to the specified value and presenting said similar values to the user as alternative value candidates from which the user can make a selection (Miyauchi, Fig. 8-9; col. 11, lines 20-56).

4. Claims 7 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, as applied to claims 1 and 45 above, and further in view of US Patent Number 6,401,084 B1 issued to Ortega et al. (hereafter Ortega).

Referring to claims 7 and 51, the combination of Bessho/Miyauchi discloses all of the claimed subject matter as disclosed above, and also discloses storing information about correspondence between a word used for specifying search criteria in an item in the database and an item name in the database (Miyauchi, col. 7, lines 48-58).

However, the combination of Bessho/Miyauchi remains silent as to replacing said item name in the database with said word to present said search results.

However, Ortega teaches replacing the item name in a database with a word to present search results (see Abstract; Summary (col. 1 line 65- col. 2, line 34); col. 7, lines 17-21).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi to include replacing the item name in the database with a word to present search results, as taught by Ortega.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of increasing the likelihood that the query result will contain items that are of interest to the user as the replacement terms found by the searching method are more likely to be the terms that were intended by the user. In addition, the method is well suited for correcting terms

that do not appear in a dictionary, such as proper names and product names (Ortega, col. 2, lines 34-47).

5. Claims 10, 13, 16, 54, 57, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi as applied to claims 1 and 45 above, and further in view of US Patent Number 5,907,837 issued to Ferrel et al (hereafter Ferrel).

Referring to claims 10 and 54, the combination of Bessho/Miyauchi discloses all of the claimed subject matter as disclosed above, and also teaches providing an item database containing all the values in a particular item that are held in a database to be searched (Miyauchi, Fig. 8-11).

However, the combination of Bessho/Miyauchi fails to teach providing an alert to the user for indicating a search failure and the cause thereof before executing the entire search process.

However Ferrel teaches analogous art wherein a user is provided with an alert for indicating a search failure and the cause thereof before executing the entire search process (col. 42, lines 60-65).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi to include providing an alert to the user for indicating a search failure and the cause thereof before executing the entire search process, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of allowing the user to know what happened when no matches to their search are found (Ferrel, col. 42, lines 60-65).

Referring to claims 13 and 57, the combination of Bessho/Miyauchi discloses all of the claimed subject matter as disclosed above, and also teaches generating search criteria to be first used in the search execution step (refer to discussion of claim 1, limitations 2 and 3 above). The combination of Bessho/Miyauchi also teaches widening search criteria so as to increase the number of search sets (Miyauchi, Abstract).

However, the combination of Bessho/Miyauchi fails to teach determining whether the search succeeds or fails based on the results of the search performed, widening search criteria so as to increase the number of search sets if the search fails, and repeatedly widening the search criteria until the search succeeds or the search criteria becomes unable to be widened.

However Ferrel teaches analogous art wherein the determination as to whether a search succeeds or fails based on the results of the search performed, in particular, situations in which a search failed due to no results or a search was successful but too many search results were found (col. 42, line 60 – col. 43, line17).

Ferrel also teaches, widening search criteria so as to increase the number of search sets if the search fails by allowing a user to find more matches by clearing some

of the query elements or values and submitting an edited search by pressing the 'Find Now' button (col. 42, lines 60-65; col. 43, lines 10-17).

In addition, Ferrel teaches repeatedly widening the search criteria until the search succeeds or the search criteria become unable to be widened wherein the user can continue to clear query elements and use the 'Find Now' button until a successful match is found or be alerted when the search criteria become unable to be widened and thus returns a 'no articles like you described could be found' alert (col. 41, lines 57-65; col. 42, line 60- col. 43, line 17).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi to include determining whether the search succeeds or fails based on the results of the search performed, widening search criteria so as to increase the number of search sets if the search fails, and repeatedly widening the search criteria until the search succeeds or the search criteria become unable to be widened, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of allowing a user to define a search object to retrieve content matching desired criteria (Ferrel, col. 3, lines 61-62). In addition, the information retrieval server satisfies the need for fast and efficient search over a low-bandwidth communication path (Ferrel, col. 4, lines 20-25).

Referring to claims 16 and 60, the combination of Bessho/Miyauchi discloses all of the claimed subject matter as disclosed above and also teaches the determination as

to whether or not an item extracted as a topic in the search request at said search request generation step corresponds to an item in the database to be searched (refer to discussion of limitation 4 of claim 1 above).

However, the combination of Bessho/Miyauchi fails to teach an alert concerning the form of the search request if the analysis at said search request analysis step fails and an alert indicating that the query is outside the scope of the system if the analysis of the correspondence fails.

Ferrel teaches analogous art wherein an alert that is provided to a user if no results are shown at the end of a search, thereby indicating that a query is outside the scope of a system (refer to discussion of claim 10 above with regard to the provision of an alert that indicates search failure). Ferrel also teaches an alert that is provided concerning the form of a search request if the analysis at said search request analysis step fails, by suggesting to the user that the form of the query was not suitable and that the user should clear some of the values in the query in order to obtain better results (col. 42, lines 60-65). Examiner respectfully asserts that the alert provided for by Ferrel performs both duties addressed above. In addition, Ferrel also teaches another alert that indicates the form of a search request if the analysis fails by suggesting to the user that the form of a query was not suitable and that the user should add more values to the query to order to reduce the number of search results obtained (col. 43, lines 10-17).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi to include an alert

concerning the form of the search request if the analysis at said search request analysis step fails and indicating that the query is outside the scope of the system if the analysis of the correspondence fails, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of allowing the user to know what happened when no matches to their search are found (Ferrel, col. 42, lines 60-65) or when too many matches are found (Ferrel, col. 43, lines 5-17).

6. Claims 12 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, as applied to claims 11 and 55 above, and further in view of US Patent Number 5,752,244 issued to Rose et al. (hereafter Rose).

Referring to claims 12 and 56, the combination of Bessho/Miyauchi discloses all of the claimed subject matter as disclosed above, and also teaches presenting an alternative to a specified value in an item to a user, and allowing the alternative to be accepted by the user (Miyauchi, see Fig. 12-13), as well as automatic widening of criteria during generation of search criteria (Miyauchi, Abstract).

However, the combination of Bessho/Miyauchi remains silent as to storing a pair of an originally specified value and an alternative as synonymous words for a value in an item.

Rose teaches analogous art including storing a pair of an originally specified value and an alternative as synonymous words for a value in an item. These stored

pairs are keyword-category pairs that are stored in a keywords table as well as a session data object (col. 14, lines 44-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessho/Miyauchi with the teachings of Rose to include storing a pair of an originally specified value and an alternative as synonymous words for a value in an item.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi with the teachings of Rose for the purpose of storing of multimedia assets which in turn allows the reusing of existing assets when developing new multimedia applications (Rose, Background, lines 39-55) and for the purpose of using predetermined criteria to determine whether to allow checkout of a particular multimedia asset stored on a database (Rose, Abstract).

7. Claims 14 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, in view of Ferrel, as applied to claims 13 and 57 above, and further in view of Ortega.

Referring to claims 14 and 58, the combination of Bessho/Miyauchi/Ferrel as set forth above discloses all of the claimed subject matter including the widening of search criteria but the aforenoted combination is silent as to the value specification for a particular item in the database being extended to the value specification for an event relating to the item.

However, Ortega teaches the extension or replacement of a value specification for an item with a value specification for a related event by replacing a non-matching term item in a search query with a replacement related term event as a substitute (refer to discussion of claim 7 above with respect to replacing an item name in a database; col. 2, line 58 - col. 3, line 2).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi/Ferrel to include extension or replacement of a value specification for an item with a value specification for a related event, as taught by Ortega.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi/Ferrel per the above for the purpose of increasing the likelihood that the query result will contain items that are of interest to the user as the replacement terms found by the searching method are more likely to be the terms that were intended by the user. In addition, the method is well suited for correcting terms that do not appear in a dictionary, such as proper names and product names (Ortega, co. 2, lines 34-47).

8. Claims 15 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, in view of Ferrel, as applied to claims 13 and 57 above, and further in view of US Publication Number 2001/0044758 A1 by Talib et al. (hereafter Talib).

Referring to claims 15 and 59, the combination of Bessho/Miyauchi/Ferrel as set forth above discloses all of the claimed subject matter, however fails to disclose a database to be searched that is composed of structured text and structure tags with corresponding text, Ferrel discloses a database to be searched that is composed of structured text (col. 25, lines 46-48). In addition Ferrel also discloses structure tags with corresponding text (col. 22, lines 18-37).

However, the combination of Bessho/Miyauchi/Ferrel fails to disclose that a structure tag is replaced with a tag covering a broader text range in a tag hierarchy to widen the search criteria.

Talib discloses a structure tag that is replaced with a tag covering a broader text range in a tag hierarchy to widen the search criteria (para. 95, Fig. 4). Talib discloses through the illustration of Fig. 4, that a user may drill-up through the search results presented, and change the category to be searched from Women's Clothing to Price, while still maintaining the same search constraints.

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi/Ferrel to include that a structure tag is replaced with a tag covering a broader text range in a tag hierarchy to widen the search criteria, as taught by Talib.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi/Ferrel per the above for the purpose of allowing a user to 'navigate' through a search using any category or taxonomy at any time. Additional motivation could be that users are able to view the transmitted and displayed categories

in order to select from, rather than being provided with long lists of electronic record hits (Talib, Summary, para 35 and 36).

9. Claims 17 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, as applied to claims 1 and 45 above, in view of Rose and further in view of Ferrel.

Referring to claims 17 and 61, the combination of Bessho/Miyauchi discloses all of the claimed subject as set forth above, but fails to disclose a list of keywords that is unique to each of various areas and is used to determine the area of the search request. In addition, it also fails to disclose an alert that is provided to the user for indicating that the query is outside the scope the system if it is determined that the area of the search request is not addressed by the system.

Rose teaches in analogous art, a list of keywords that is unique to each of various areas and is used to determine the area of a search request (col. 17, lines 36-39 and 46-50; col. 20, line 66- col. 21, line10).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi to include a list of keywords that is unique to each of various areas and is used to determine the area of a search request, as taught by Rose.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of specifying a keyword-

category combination to add a search component to a query (Rose, col. 21, lines 10-18).

However, while the combination of Bessho/Miyauchi/Rose discloses the above mentioned limitation, it is silent as to an alert that is provided to the user for indicating that a query is outside the scope a system if it is determined that the area of a search request is not addressed by the system.

Ferrel teaches in analogous art, an alert that is provided to the user for indicating that a query is outside the scope of a system if it is determined that the area of a search request is not addressed by the system (refer to discussion of claims 10 and 16 above).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi/Rose to include an alert that is provided to the user for indicating that a query is outside the scope of a system if it is determined that the area of a search request is not addressed by the system, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi/Rose

per the above for the purpose of allowing the user to know what happened when no matches to their search are found (Ferrel, col. 42, lines 60-65) or when too many matches are found (Ferrel, col. 43, lines 5-17).

10. Claims 18 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, as applied to claims 1 and 45 above, and further in view of Ortega.

Referring to claims 18 and 62, the combination of Bessho/Miyauchi discloses all of the claimed subject as set forth above, but fails to teach that search criteria for an item on a main item list provided in advance are generated for a topic in a search request for which no correspondence to an item in a database is found at said search criteria generation step to repeat the search in each of the main items and present the search results to a user.

However, Ortega teaches a 'related terms' list provided in advance that is generated for a topic in a search request for which no correspondence to an item in a database is found and repeats the search in each of the main items and presents the search results to a user (see Summary, col. 1, line 65- col. 2, line 33). Ortega teaches that the related terms list is used to compare related terms in the list to one or more non-matching terms in a query to find possible substitutes. The user can also be prompted to select possible replacement terms for the non-matching term from a list that is presented. The search is then performed on the modified query once the replacement term is chosen. Examiner respectfully asserts that this process of choosing a replacement term is performed multiple times, with a modified search being performed each time for each of the one or more non-matching terms in the query.

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi to include that

search criteria for an item on a main item list provided in advance are generated for a topic in the search request for which no correspondence to an item in the database is found at said search criteria generation step to repeat the search in each of the main items and present the search results to the user, as taught by Ortega.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of enabling users of the spelling correction method of Ortega to select replacement terms that are more likely to be the terms intended for use by the user. The method increases the likelihood that the query result will contain items that are of interest to the user (Ortega, col. 2, lines 34-47).

11. Claims 19 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, as applied to claims 1 and 45 above, in view of Ferrel, and further in view of US Publication Number 2002/0107735 A1 by Henkin et al (hereafter Henkin).

Referring to claims 19 and 63, the combination of Bessho/Miyauchi discloses all of the claimed subject as set forth above, but fails to teach that a database to be searched is a text base structured with tags, and if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag added to words to be searched to present the results to the user.

However Ferrel teaches analogous art wherein a database to be searched is a text base structured with tags (refer to discussion of claim 15 above with regard to a structured text database).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi to include a database to be searched that is a text base structured with tags, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of indexing database content (Ferrel, col. 3, lines 40-65; col.25, lines 46-50).

However, while the combination of Bessho/Miyauchi/Ferrel discloses the above mentioned limitation, it is silent as to the situation wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag to present the results to the user.

Henkin teaches analogous art wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag (para. 48). Henkin also teaches that the results of the search are classified by tag to present the results to the user (para. 93- 98; refer to Fig. 24d in reference to classification by categorical tag, namely, 'Apparel', 'Hawaiian Apparel', and 'Work Clothes and Uniform Apparel').

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi/Ferrel wherein if

analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag to present the results to the user, as taught by Henkin.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi/Ferrel per the above for the purpose of marking up textual object returned from the search and thus enabling any targeted word, phrases, etc. on any parsed web page to be converted to a link of any designation. In addition, this context-based technology proactively responds to textual content on any given web page, anywhere on the Internet, by marking up predefined keywords or phrases. In this way, target HTML content can be converted into links that direct users to specific web pages (Henkin, para. 48,50).

12. Claims 20, 21, 64, and 65, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, as applied to claims 1 and 45 above, and further in view of US Patent Number 5,640,553 issued to Schultz.

Referring to claims 20, 21, 64, and 65, the combination of Bessho/Miyauchi discloses all of the claimed subject as set forth above, but remains silent as to:

- a text base database to be searched that is structured with tags in a main database;
- a provided list of items essential to a subject that is referenced to determine whether or not an essential item for one of items constituting a subject of the text to be entered is described in the text;

- searching a secondary database provided for the missing item by specifying a key item of the subject in the text to be entered and having the text complemented with a value obtained;
- replacing the list with a value specified for the tag to search through the main database.

However Schultz teaches in analogous art:

- a text base database to be searched that is structured with tags in a main database (col. 24, lines 43-46 and 50-52; 'image/text database', col. 29, lines 21-29 (Fig. 1, element 118); 'library database', col. 9, lines 15-18);
- a provided list of items essential to a subject that is referenced to determine whether or not an essential item for one of items constituting a subject of the text to be entered is described in the text ('index database', col. 4, lines 11-18; 'list of classifier words', col. 32, lines 25-29);
- searching a secondary database provided for the missing item by specifying a key item of the subject in the text to be entered and having the text complemented with a value obtained (different 'subject databases' can be searched, col. 32, lines 10-29);
- replacing the list with a value specified for the tag to search through the main database (col. 31, lines 44-55; col. 32, lines 10-22[1]).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi with the teachings of Schultz to include a text base database to be searched that is structured with tags in a main database, a provided list of items essential to a subject that is referenced to determine whether or not an essential item for one of items constituting a subject of the text to be entered is described in the text, searching a secondary database provided for the missing item by specifying a key item of the subject in the text to be entered and having the text complemented with a value obtained, and replacing the list with a value specified for the tag to search through the main database.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of enabling users to search particular subjects and to avoid searching through documents that are unlikely to be of interest to the user, which is done by the categorization of input documents (Schultz, col. 31, lines 44-54).

13. Claims 22 and 66, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Miyauchi, as applied to claims 1 and 45 above, in view of Schultz, and further in view of Ortega.

Referring to claims 22 and 66, the combination of Bessho/Miyauchi discloses all of the claimed subject as set forth above, but remains silent as to:

- a database to be searched that is a text base structured with tags;

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[1] The user can specify individual category or subject databases to search through within the image/text

- values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database; and
- a group of spellings resembling each other is retrieved from each of the individual databases after the completion of the entry to enable a precise detection of variations in notation compared with that in a case where the entire text is searched.

However, Schultz teaches in analogous art:

- a database to be searched that is a text base structured with tags (refer to discussion of claim 21 above in reference to limitation 1); and
- values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database (subject databases reside within the image/text database of the information retrieval system and are accessed when a query is input, col. 31, lines 44-55; col. 32, lines 10-22).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi with the teachings of Schultz to include a database to be searched that is a text base structured with tags and values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database.

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database.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi per the above for the purpose of avoiding searching through documents in a database that are unlikely to be of interest to a user, since a user can specifically search particular databases or categories (Shultz, col. 31, lines 44-52).

While the combination of Bessho/Miyauchi/Shultz mentions the fact that queries are spell-checked before being processed (Schultz, col. 12, lines 36-45), it remains silent as to the retrieval of a group of spellings resembling each other after completion of input of a search query.

However, Ortega teaches retrieval of a group of spellings resembling each other after completion of input of a search query ('associated related terms list' (Fig. 3, element 62), col. 4, line 61- col. 5, line 18; col. 7, lines 10-24).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Miyauchi/Schultz with the teachings to Ortega to include retrieval of a group of spellings resembling each other after completion of input of a search query.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Miyauchi/Schultz per the above for the purpose of correcting misspellings of terms that are do not appear in a dictionary thereby identifying terms that tend to be characterized by non-dictionary terms (Ortega, col. 7, lines 25-29).

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M Fernandes whose telephone number is (571) 272-4018. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMF
December 22, 2005

UYEN LE
PRIMARY EXAMINER